

SCHOOLSCAPES

WORKING TOGETHER
TO INSTRUCT, SOCIALIZE AND PROVIDE QUALIFICATIONS

*MATHEMATICS, SCIENCE
AND TECHNOLOGY IN
ELEMENTARY SCHOOL*

Reach for
your **Dreams**

Québec 

Summary

VOL. 5, NO. 1—OCTOBER 2004

BUILDING AN EDUCATION PROGRAM 3

- Lighting Up the Sky 3
Opération Coco-Logix 6
Robotics Competition 8
Mr. Jacob and his Young Citizens 10

EXCHANGING AND LEARNING 12

- Province-wide meeting April 21-22
Pedagogical and Organizational Culture 12
Conference on the Educational Integration of Immigrant Students
Learning to Live Together 14
Innovative Practices 16
Conference on Complementary Educational Services
Services for Success 18
Are you a victim or an agent of change? 19
Two Examples of Innovative Projects 20

EVALUATION OF STUDENT LEARNING 22

- Development of a New Mathematics Examination 22

INFORMATION 24

COVER PAGE

Two students working on *Opération Coco-logix*

By Francine Payette (Translation)

From their earliest days in elementary school, students are encouraged to explore, understand and explain their world. To help them see the connections between the subjects when analyzing a problem, the Québec Education Program has grouped the subjects into subject areas. Thus, by participating in learning activities and developing specific competencies in the subject area of mathematics, science and technology, students acquire powerful intellectual tools—the cross-curricular competencies.

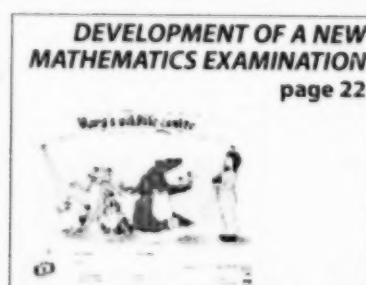
"Human action depends on our memory of the past, our analysis of the present and our anticipation of the future," Ilya Prigogine once observed. This Nobel Prize laureate for chemistry, who died in 2002, realized the importance of specific knowledge derived from the culture of each subject, but also grasped the need for strong skills in processing information and constructing responses and solutions, which depend on our capacity to take effective action, our knowledge of our strengths and weaknesses and our vision of an ever-changing reality.

This issue of *Schoolscapes* features a teacher who has developed expertise in working with learning and evaluation situations related to the development of competencies in mathematics, science and technology in elementary school. It showcases a prototype of the mathematics examination for the end of elementary school. It also reports on various meetings, conferences and events, including *Opération Coco-logix*, which involved roughly 600 students in Elementary Cycles Two and Three, and the *CRC Robotics Competition*, in which about 400 secondary students participated.

While school personnel are the key players in fostering student commitment and motivation, it should be noted that the two science activities featured in this issue were carried out in partnership with several community, university and scientific organizations, whose members devoted much of their leisure time to serving as mentors to both teachers and students.

Meanwhile, the National Assembly is also working in partnership with schools to support the broad area of learning *Citizenship and Community Life*. Its educational activity "Parlement écolier" offers students the chance to draft bills and participate in debates on their adoption. Share the adventure by reading about "Mr. Jacob and his Young Citizens."

Enjoy your reading!



BUILDING AN EDUCATION PROGRAM

By Pascale Sauve (Translation)

Lighting Up the Sky

Today the afternoon is devoted to science and technology. The desks have disappeared under electronic equipment, cardboard boxes, tubes of glue and paint, saws and drills. Students are busy everywhere, working with their hands, discussing what's to be done, trying to solve technical problems. Despite the general noise, they are all totally focused on their tasks.

Lussier, a teacher at Larocque elementary school in Saint-Hyacinthe, has been using this approach since he began experimenting with learning and evaluation situations in his classroom. This year alone, he is on his ninth situation. His students have already built a mini-golf course in the school yard, put together miniature cars, made giant puppets and much more. Today, they are recreating the sky. "The purpose of the learning and evaluation situations I use in the classroom is to motivate my students," the energetic teacher explains.

Creation

The adventure began last year, when Brigitte Provençal, the school board's education consultant in mathematics, science and technology asked teachers to work on developing learning and evaluation situations. Lussier immediately answered the call. "At least one teacher per school is taking part in the project," he says. "We've mostly developed situations in mathematics, but we're slowly getting into the sciences as well. Our goal is to give students all the baggage they need. Situational problems should be put in context. They should be meaningful and relate to everyday life. They should allow students to understand the purpose of what they're learning in class and help them see that the classroom is a microcosm of the world they live in."

To create this learning and evaluation situation, Lussier worked in close collaboration with the education consultant and a secondary school science teacher. "We want to make sure there's a link between elementary and secondary school," he explains. "We compared our respective programs. We follow the same broad orientations, but we work on different projects. In developing this task, which is called 'Allume le ciel,' we met seven times. The process was enriching and motivating."



The big bang

"Allume le ciel" is a project that combines science and technology. "I asked my students if they had ever slept outdoors, under the stars and observed the sky," says Lussier. "What I'm proposing is that they bring a part of the sky into the classroom." The students' task is to build an electric lighting device that represents a constellation and contains a moving celestial body.

The project is spread out over several weeks. Students first had to prepare themselves for the technical challenge. "After I presented the situation, the students had to think about the problem I had submitted," says Lussier. "They had to formulate scientific, technological and methodological questions. They then compared their questions with those of their peers and wrote them in their log books. They looked up the meanings of any new words in order to understand the task. They wrote in their own words what they understood of the task and what they already knew on the subject. Then they each chose a constellation and collected information—I had targeted the cross-curricular competency 'to use information' for this project. The students had to know the name of each of the stars in their constellation, as well as its age, magnitude and luminosity. Finally, they presented me with a solution to the problem. To build the system, the students work in teams of two. They have to write down what they're doing—all the steps of their process—in their log books."

This project is part of the research and development work being carried out by the MEQ in collaboration with the schools. It involves developing and field-testing learning and evaluation situations that reflect the QEP's orientations for evaluation and collecting samples of student work to illustrate the competency levels in elementary school. These learning and evaluation situations and work samples will later be made available to all schools.

Normand Dufour

*Evaluation Coordinator for Mathematics,
Science and Technology*

The log book is clearly a useful tool for evaluating competencies. "I also prepare an observation table," adds Lussier. "I look at two or three students a day and I write down how they've progressed, the problems they encountered, how they solved them, etc. I strongly believe in authentic evaluation. It should be said that the more the year progresses, the better I know my students and the easier it gets to make my observations."

Stars are born

In the classroom, the students are hard at work. Some groups are working on their electrical systems, while others are building their structures, with saws and drills in hand. Lussier moves among the cluttered desks, listening to the problems, asking questions and giving tips and explanations along the way. "When we ask him a question, he acts as if he doesn't know anything!" says one student, laughing. "I feel it's up to them to try and find the answers first," explains the teacher. "Sometimes they make extraordinary discoveries. I start by sending my students off on an adventure, and then I interrupt for breaks when necessary. At one point, I felt I needed to teach them some concepts about electrical circuits in order for the project to move forward. When problems arise, I stop the project for a few minutes and teach the material. The students try putting it into practice when they go back to the project."



"I have a guiding thread that gives direction to the project," says Lussier. "But I never know what the end result will be." One student found a Secondary IV physics book and applied some of its concepts. He and his teammate decided to build a system of mirrors to reflect the light. Another team became interested in magnetism and used a system of magnets to create their moving body. Other groups have chosen a mobile or a planetarium. "They amaze me!" says Lussier. "They're curious and imaginative. I have to teach them concepts I've never introduced in elementary school before. Often, they send me off the beaten path. So we think about the problem together, do research, experiment and find solutions. It can be disconcerting at times, but we learn together."

"The advantage of the learning and evaluation situations is that the students can work at their own individual pace and go as far as they want," says Lussier. "What's important is that I feel that each student is progressing." The results are remarkable. He has noted that his students are more engaged, motivated, stimulated and focused. The proof is that some even stay after school to work on their projects.

"The active aspect of these projects is appealing," he says. "It channels their energy, and everyone finds something that's right for them." Behaviour problems have become rare. "I have one student everyone said was a problem case. Yet in my class, he functions well. I figured out that he was bored. Since he has taken his learning into his own hands, everything is different. He's still the same person. I haven't changed him, but he's a child with a lot of resources and he's realized that school can be interesting."

The greatest discovery for students is becoming aware of their own potential. "When I finished my first project, it was the first time I ever felt competent and intelligent," says one student. "I went all out. I pushed my limits and succeeded. I didn't know I could do that!"

To Lussier, each student is a star, a light that must not be allowed to go out. His classroom is already aglow with a thousand lights and a thousand smiles. ■

"Students tackle problems related to their immediate natural or built environment by making observations and handling objects. They then propose explanations or solutions concerning scientific or technological problems. In so doing, they construct their own knowledge, become familiar with concepts that enable them to better understand their immediate environment, and develop scientific and technological ways of doing things (e.g. experimental method, observational method, design method, analytical method, production method). It is important to ensure that the students follow safety rules or instructions when they use tools, instruments or procedures."

*Excerpt from: Competency Levels
by Côté, Elementary School, p. 51*

The three competencies of the elementary school Science and Technology program

To propose explanations for or solutions to scientific or technological problems

- To assess his/her approach
- To use a variety of exploration strategies
- To identify a problem or define a set of problems

To make the most of scientific and technological tools, objects and procedures

- To evaluate the impact of different tools, instruments or procedures
- To relate various technological tools, objects or procedures to the situations and ways in which they are used
- To become familiar with the roles and functions of scientific and technological tools, techniques, instruments and procedures

To communicate in the languages used in science and technology

- To make effective use of everyday and symbolic language to formulate a question, explain a point of view or give an explanation
- To become familiar with everyday language related to science and technology
- To use everyday language and symbolic language related to science and technology

By Pascale Sauré (Translation)

Opération Coco-Logix

A celebration of science

Hundreds of students flooded into Cégep Ahuntsic on a glorious spring day, carrying posters, boxes and equipment, ready to set up their stands for this important science exhibition. About 130 classes from Elementary Cycles Two and Three came with their teachers to present their favourite scientific discoveries from the year of experimentation.

"Communicating research results at science conventions and events is essential for a researcher," explained the chair of the Éclairs de sciences working group, Joël Monzé. "It's a way of transmitting new knowledge and finding out about other people's ideas. There's a widespread belief that scientific research is solitary work, but that's a myth. When we created this project, we wanted to give children a chance to explore the scientific method, and we included the communication of results. That's how we got the idea for Opération Coco-Logix."

In addition to the exhibition itself, the day's activities included viewing a science film and participating in a fun, non-competitive, educational rally organized by some 30 science recreation organizations. Teachers, education consultants, school principals and the media were invited to come and admire the work of these budding scientists and look at the world through their eyes.

Origins

Opération Coco-Logix was the closing event to a full year of activities carried out as part of the Éclairs de sciences project, one of seven projects initiated by L'île du savoir. Established by various socio-economic and political bodies in the Montréal region, L'île du savoir promotes science and technology careers to the general public. "Over the last 15 years, half the job growth in Québec has been in the area of knowledge," said Georges Bossé, chair of the Conférence régionale des élus de Montréal. "Two thirds of these jobs are in the metropolitan region. The demand for high-tech workers outweighs the supply." This observation led to action.

Among its many initiatives, L'île du savoir gave an important mandate to the Forum jeunesse de l'île de Montréal to find ways to get 8-to-12-year-olds interested in science and technology. "We created a working group with people from different sectors and thought about the question," said Charlene Bélanger, project officer at the Forum jeunesse de l'île de Montréal. "We didn't want to hold a competition, since there are already so many and they're often elitist. Instead, we wanted to find a way to make science accessible and appealing to everyone." That's when the light bulb went on.





The project

"In order to attract children to the sciences and foster their creativity, we decided to offer support to teachers in Elementary Cycles Two and Three to help them organize original and interesting science activities in their classrooms," explained Marie-Laure Landais, chair of the Forum jeunesse de l'île de Montréal. "We wanted to emphasize activities that enable children to discover and understand different aspects of the world around them." After consultation with teachers, education consultants and other people concerned with science education, three tools were developed.

First, seven teacher's guides were produced, which introduce teachers to the four stages of the active research method and provide more than 75 activities for use in the classroom. "They contain all the essential knowledges of the three main areas covered in the Québec Education Program: living things, the material world, and Earth and space," said Landais.

"Each one begins with a situation from everyday life," Bélanger explained. "We get students to wonder about some phenomenon in their daily lives and give them a problem to solve. So they have to experiment. At the end, we propose avenues for applying what they've learned and making connections with current events, history and literature. So teachers can help the students transfer what they've learned to other subjects." The activities can be carried out alone or as part of larger projects.

The second tool involves a team of some 50 scientists who volunteered to provide teachers with guidance. "We recruited them in companies and research centres in the region," said Landais. "They are available to help teachers plan science activities, answer their questions and clarify certain concepts." Each scientist was assigned to a team of two or three teachers and worked with them to carry out classroom projects.

The third tool is a Web site. "It provides an exhaustive directory of resources for promoting science and technology to young people. It is a valuable resource for teachers at all levels," said Michel Sylvestre, president of L'île du savoir. The site is accessible to everyone and contains all the guides from the Éclairs de sciences project, which can be downloaded for free in PDF format.

Success

The Éclairs de sciences project reached nearly 130 teachers in 18 elementary schools belonging to the five large school boards on the Island of Montréal. More than 3000 students benefited from the project in 2003-2004, and it is continuing this year. "We should be able to offer the program to more schools," Landais announced. "In all, about 30 schools will participate."

"Our objective is to stay in each participating school for one or two years, and then to offer the service to other schools," explained Bélanger. "We want to give teachers the tools to become autonomous, so that they feel comfortable and enjoy carrying out science activities with their students. We also want as many schools as possible to benefit."

For the moment, the program is limited to the Montréal metropolitan area. However, a pilot project inspired by Éclairs de science will take place this year in the Québec City area. Who knows! — the idea could spread throughout the province! ❧

For more information on Éclairs de sciences, visit the Web site of the Forum jeunesse de l'île de Montréal.
www.forumjeunesdeliledemontreal.org



Photos: Jean Bourdieu and L'IDM

By Eve Krakow

Robotics Competition

Robots get points for picking up tennis balls of the right colour and dropping them into the cones. Sound easy? Think again. "We were up until 3:30 a.m. last night trying to fix our robot," said Alex Ethimepoulos, a Secondary V student from Western Laval High School, just before the first round of heats began. "Then this morning a circuit blew."

The three-day event is the culmination of weeks and weeks of work, much of it beyond regular school hours. In addition to designing and building a robot to play a specific game, students have to write a 12-page journal documenting the building of the robot, produce a 5-minute documentary video, create a Web site to promote their team, their school and the competition, and set up an information kiosk at the event. All components have to be bilingual.

A multidisciplinary activity

The annual competition is organized by CRC Robotics in association with the Educational Alliance for Science and Technology (EAST). Mike Downey, a chemistry teacher at Selwyn House, is one of the project's initiators. Four years ago, he teamed up with fellow teachers Tom Downey and Brad Moffat from Selwyn House and André Barette from Collège Laval. They wanted to create a motivating learning situation that would use the principles of the Quebec education reform and the strengths of the secondary school curriculum to help students learn.

"We tried to come up with an idea that would incorporate as many subjects as possible," said Downey. Students are judged on all aspects: journal, Web site, kiosk, video, robot design, the game and sportsmanship. "However, it is the robot that motivates the kids."

The competition rules state that students must do all the planning and building. Teachers provide support and act as advisors. Outside professionals, such as engineers, can be called on as mentors to help students with questions that exceed the students' or teacher's knowledge. However, only the students are allowed to touch the robot.

About 400 students from 16 secondary schools and one CEGEP participated in the competition's 2004 edition, held in February at Lauren Hill Academy's junior campus. Team sizes ranged from 4 to 60 students. In most cases, they were divided into subgroups, with each group responsible for one of the five components.



Photo: Phil McGarry

Sarah Al-Roubaie, a Secondary V student from Sacred Heart School, led the engineering team and piloted her team's robot at the competition. Designing the robot was not easy, she said. "Every time we thought of an idea, something went wrong." She learned a lot about planning and engineering—and wiring, in particular.

Coming from an all-girls school, Al-Roubaie was on the only all-girl team. "A lot of people think building robots is just for guys. We hope to prove them wrong." Tired of comments on their all-girl status, the girls decided to push the stereotype all the way, painting their robot pink and calling it "Elle."

Judges from the Canadian Space Agency

To judge the best robot design, engineers were brought in from McGill, the École de technologie supérieure, CAE, and the Canadian Space Agency (CSA). David Phillips works on the Canadarm II robotics team at the CSA. "The overall skill is impressive," he said. He also noted that the work required of the students "is similar to the work we do."

The engineers also had to certify that all components of the robots were on the list of acceptable components. "We try to maintain a level playing field, so that a team with more money can't go out and buy a better motor, for example," Downey explained.

A teacher's perspective

"If ever there was an example of the reform, this is it," said Peter Harbert, a physics teacher from Rosemere High School. Participating for the second year, his school had a team of 32 students. Ten teachers of Math, English, French, Information Technology and History were also involved. "The learning experience for students is incredible," Harbert said. "They learn people skills, leadership skills and how to resolve arguments among themselves. Normally in a classroom, there's always a teacher there to intervene. Here we stand back and let them figure it out."

As teams encounter one glitch after another, a large part of the event involves problem solving and troubleshooting. "Frequently, the team that wins is the one able to deal with things as they happen," said Downey.

Did someone say Apollo 13? ☛

About CRC Robotics

CRC Robotics is a non-profit organization associated with the Educational Alliance for Science and Technology. The organization initiated the CRC Challenge with the following goals in mind:

- to set up a student-oriented and student-directed activity
- to create a project that integrates science, math, multimedia, language arts and computers
- to develop a hands-on approach and help students link the classroom to the workplace
- to foster and build teamwork and communication skills
- to promote the idea of working together to accomplish a common goal
- to instill the concept that achieving team goals is more important than winning

Gearing up for 2004-2005

The CRC is now busy preparing for this year's competition. The theme is **Targeau-Bonseye 2005**. Here is the schedule of events.

- **Sept. 29, 2004:** Teacher information night. This is an opportunity for teachers to hear what the CRC Robotics Challenge is all about.
- **October 29, 2004:** Deadline for registration.
- **November 19, 2004:** Teacher workshop day. Teachers involved in the program are invited to spend the day with the competition organizers. The workshops give teachers a chance to familiarize themselves with the equipment used in the competition.
- **November 19, 2004:** Official publication of the rules. All schools are given a set of rules for the game their robots will be expected to play.
- **December 6, 2004:** Kick-off day. All schools meet and spend an evening at the host school. They receive their kits, which include motors, control boards and other components, and they participate in workshops to learn how everything works.
- **February 17-19, 2005:** Targeau-Bonseye 2005 at John Rennie High School. Let the games begin!

Unfortunately, there is a high entry fee to participate. Downey hopes to eventually increase the number of partners so as to lower the cost.

For more information, visit
www.roboto-crc.ca.

By Marie Perle (Editor) (Translation)

Mr. Jacob and his Young Citizens

Every spring for the past eight years, 125 students at the end of Elementary Cycle Three have spent two days at the Legislative Building in Québec City as part of the *Parlement écolier*, an educational activity in which each of these young people steps into the shoes of a Member of the National Assembly to experience a simulation of the legislative process. The aim of the activity is to heighten students' awareness of the democratic process and the importance of the role of citizens and their participation in the choice of their representatives. For Jacob and his colleagues at the Jardin des Saint-Anges school, however, the *Parlement écolier* serves a much broader educational goal, as it provides an opportunity for his students to sharpen their critical thinking skills and to appreciate that everyday democracy is a complex process involving debate and calling for logic and consistency. Last May, Jacob attended his sixth *Parlement écolier*, accompanying students Lydia St-Germain and Jonathan Boulay, representing two classes in his school, who had been invited to deliberate on the three best bills chosen from the 125 bills received.

"Each fall, I take my students to visit the National Assembly in Québec City," Jacob said. "It's often their very first contact with politics and democracy. When we come back, I propose that they participate in this activity and introduce them to the parliamentary process. We write up a bill in class and submit it, with the aim of representing our constituency and with the hope that it will be selected as one of three bills to be debated by all student MNAs. We send our bills to Québec City, and if one of them is selected, then we present it to the model National Assembly!" The process is a long one, stretching from November to May. It can be arduous, and Jacob sometimes has to find ways to make writing the bills appealing to his young citizens. "I explain that a law should change something. It should allow or prohibit something. A good bill should stir up controversy if it is to be debated in the assembly. And some of the students' topics have generated intense debate."

That is the extraordinary thing about this adventure, since all the students' bills reflect their own concerns and priorities. "Working together, we start from their interests and their needs," the teacher explained. "What better way to help students understand the need for rules in society?"

Jacob considers the *Parlement écolier* project a valuable educational tool that enables him to rally his students around common concerns. Yet this year, when he made his pitch for the project, he was met with an unprecedented rejection. "My students told me straight out that they weren't interested in participating." Aware that this type of project can only work if the students are motivated, Jacob, though disappointed, accepted the decision of his class. Then, when he least expected it, a group of students came to see him. "They said, Mr. Jacob, we would really like to do it." I explained that it would be extracurricular work, since the rest of the class didn't want to participate. They still wanted to go ahead. In addition, this year's *Parlement écolier* was to take place on pedagogical days, which meant they would lose these holidays. But they never even mentioned that! The small group of students and their teacher set to work. "I followed the same timetable as usual. We met in the library all winter to work on our bill."



PARLEMENT
ÉCOLIER



The bills are a reflection of concerns in the school community; those presented by Lydia and Jonathan could not demonstrate this more clearly. The bill put forth by Lydia, one of Jacob's students, proposed a system of bursaries for parents according to the academic achievement of their children, while the bill presented by Jonathan proposed that every student in Elementary 6 be provided with a laptop computer to work on.

When they get to Québec City, the students' work schedule is very busy. They have to sit on parliamentary committees to study the three bills that have been selected. Then they have to vote in the National Assembly. But when Lydia and Jonathan came out of the Legislative Building, their shining faces said a lot about their experience. "I wanted to see what it was all about," Lydia confided, "and it's really impressive!" As for Jacob, he has not given up on repeating the experience next year. "It's great spending two days at the National Assembly with students!" he said as he ran to catch the bus. 🚗

The Parlement écolier

The Parlement écolier is for students at the end of Elementary Cycle Three. The purpose of this parliamentary simulation at the Legislative Building is:

- to give 125 elementary school students a chance to sit in the National Assembly and to experience *Democracy in the Schoolyard and Beyond* (videocassette)
- to introduce students to the legislative work of a member of the National Assembly through simulation and role playing
- to increase student participation in the development of Québec society
- to heighten students' awareness of the democratic process, the importance of the role of citizens and their participation in the choice of their representatives, the functioning of the National Assembly as a democratic institution, and the need to respect that institution

For more information about the Parlement écolier (held in French only), visit the following Web site: <www.assnat.qc.ca/fra/education/parlementecolier/index.html>

You can view short videos of the activities by clicking on "vidéo 2004." In addition to Jonathan and Lydia, you can see the other 123 student MNAs at their swearing-in ceremony, at the opening of the eighth Legislature of the Parlement écolier, during their preparations for the parliamentary committees, and giving assent to the two bills passed by the model National Assembly.

The students also had an opportunity to ask questions of the Minister of Education, Pierre Reid, who came to meet with them in the National Assembly.

To find out about the bills drafted and presented by the students in previous sessions of the Parlement écolier, click on "Lois" on the Web site.

For more information about the educational activities offered for schools by the National Assembly, visit <www.assnat.qc.ca>.





A meeting of the minds

Province-wide meeting, April 21-22

By Priscille Snuvé (Translation)

To participate in the Parlement écolier 2005

- Participants must be enrolled in Elementary 6.
- A school may register more than one class.
- Each class that registers will receive a teacher's kit, which is needed to prepare for the activity.
- Each class must formulate two questions: one addressed to the president of the National Assembly, and the other to the Minister of Education.
- Each class must elect a student MNA. A description of the process for electing the student MNA is provided in the teacher's kit, which is sent upon receipt of the registration form.
- The participants in each class draft a bill on a topic of their choice. A simple model adapted for elementary school students is included in the teacher's kit.
- Students must be accompanied by their teacher.
- The activity takes place entirely in French.

To register

Contact Nicole Bolduc
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nbolduc@assnat.qc.ca

After five years of province-wide meetings, it is heartening to see the sustained interest that brings us the maximum number of participants we can accommodate each time," said Nicole Gagnon, coordinator of the province-wide meeting, to the 600 participants from all Québec school boards. "It's been five years and 14 meetings, and the collective project is still on track. This assembly is testimony to that fact."

Work is ongoing. We've come a long way since the implementation of the reform first began, but the process is not over, say the organizers. "A reform of this magnitude demands the attitude of a marathon runner, not a sprinter," said Robert Bisailon, Assistant Deputy Minister for Preschool, Elementary and Secondary Education. "Because changing a culture requires time and commitment."

"The current state of pedagogical and organizational culture is a serious topic," added Nicole Gagnon, "but we've decided to treat it with humour, too, because sometimes we can learn by examining and caricaturing our own shortcomings." The meeting therefore kicked off with a presentation by the theatre group



Robert Bisailon, Assistant Deputy Minister for Preschool, Elementary and Secondary Education.



Nicole Gagnon, coordinator of the province-wide meeting.

Tac.com, which looked at the role of educators and at certain priorities.

Priorities

"The main beneficiary of this changing culture is the student. We must never forget that," said Bisailon. "The other beneficiaries are teachers and complementary educational services staff, who have made gains in terms of professionalization. They are the driving force behind this transformation. Priority should therefore be placed on the students—their learning, their development and their guidance—and on the staff and their professional judgment, respect for diversity, support and teamwork. The change in culture also implies placing priority on organization, on remembering the real meaning of things, on the integration of approaches and on professional development. This transformation concerns everyone: there can be no spectators or observers, only actors."

Two major issues were on the agenda for these two days. First, participants were invited to explore in greater depth the values, orientations and strategies of the *Policy on the Evaluation of Learning*. They also discussed what organizational changes this policy requires.

The second topic was the Basic School Regulation, which is currently under review and will undergo important amendments next year, especially as concerns Secondary Cycle Two. Eleven proposals were submitted to the education community in a consultation last spring. "We're focusing on diversification, which is not a new concept," explained Claude Moisan, coordinator of pedagogical organization. "If we go back to the Estates General, people were already talking about the need to diversify secondary education to take into account the needs, characteristics and interests of all students, and to vary the education menu in Secondary Cycle Two in order to increase perseverance and improve graduation rates. What is new, however, is the conviction on the part of authorities concerning the need to formalize and legitimize this diversification in the curriculum and the Basic School Regulation." Participants had a chance to examine and discuss some proposals on the diversification of paths. ■

QEP Implementation Calendar

In the spring, a new calendar for the implementation of the QEP was distributed to the school system, taking into account the Minister's decision to postpone implementation in secondary school by one year.

Mandatory application of the QEP for Secondary Cycle One, which was sent to schools and school boards in February, will therefore begin in September 2005. The QEP for Secondary Cycle Two, which is currently being developed and written, will be implemented progressively, starting in fall 2006. In both cases, the programs will be made available to the schools one year before the mandatory implementation date to give educators a chance to become familiar with it and try it out.

Gérard Guimont
Direction des programmes

[www.meq.gouv.qc.ca/dgfi/dp/
programme_de_formation/
calendrier/calendrier.pdf](http://www.meq.gouv.qc.ca/dgfi/dp/programme_de_formation/calendrier/calendrier.pdf)



Conference on the Educational Integration of Immigrant Students

By Pascale Sauvé (Translation)

As Québec receives a growing number of immigrants every year, integration and education are becoming increasingly important. Currently, 10.6 per cent of students in the youth sector are allophones, representing a wide range of countries of origin, languages, cultures, religious beliefs, etc. In several schools located in the Montréal region and elsewhere in the province, allophone students represent at least 25 per cent of the student population.

How the school welcomes these students is important, because it affects their integration into school and society. The conference served to stimulate thought about the challenges of welcoming, integrating and educating new allophone students, managing diversity in the shared space of school, and developing intercultural education.

Diversified models

The increasingly diverse profile of new immigrants has led the school system to review its approach to welcoming new students and helping them learn French. The predominant model used in recent years—the closed welcoming class, which students attend for 10 months before joining a regular class—is not sufficient to meet the different needs and characteristics of immigrant students. It has become evident that some

students require more support and more time to learn French or to catch up in their studies, while others require less. Hence the need to provide different models and to consider a variety of teaching methods.

This new diversified approach was taken into consideration when the new programs for immigrant students were developed. "There are already several different models in the schools," noted Suzanne Belzil, responsible for the Programme d'intégration linguistique, scolaire et sociale (Secondary Cycle One). "Care was taken to keep the program flexible so that it can be used in different contexts and realities, both in Montréal, where there is a large immigrant population, and in the regions, where there are fewer immigrants and it is not always possible to set up welcoming classes."

"The welcoming class is often seen as a place where the students learn French. The program has a much broader aim: to integrate students into the school community, and by extension, into Québec society," said Belzil. Today's perspective is broader. The school must enable students not only to achieve academic success, but also to take their place in the community and to develop a sense of belonging. It must help students learn to live together and prepare them to join a francophone, democratic and pluralistic society in Québec.



Key ideas and new approaches

It was a productive day. The theme was addressed using a combination of lectures, roundtable discussions and workshops. Several key ideas emerged from the presentations, discussions and exchanges.

It was agreed that the primary determinants of integration are the individual students themselves: who they are; what they have experienced and are experiencing; as well as their characteristics, needs and interests. These factors determine what kind of intervention is needed to foster the students' linguistic, academic and social integration. The schools must give immigrant students the same chances for success as they give other students. To accomplish this, new diversified practices and approaches will be necessary.

It was recognized that integration is a long process that continues throughout the child's studies and even beyond. However, responsibility for integration does not fall solely to the teacher in the welcoming class: all of the school personnel and the school community must participate.

Since the children's reality is complex, it was felt that an overall approach should be adopted, one that takes into account all dimensions of the children and their environment. Indeed, the need to establish connections between school, family and community is essential and cannot be ignored.

It was recognized that the school is a place of transition and cultural mediation. It is responsible for welcoming students into their new culture and facilitating their integration, but also for making connections among the different cultures present in the host society. The school has a mission to help students learn to live together in community.

In the area of school organization, the participants advocated partial or total integration into regular classes as soon as possible, and establishing teams to provide support to teachers in regular classes. They also recommended having more meetings and exchanges between students as well as between teachers of the welcoming and regular classes.

The participants of the conference have taken up a formidable challenge! 🍀

Schoolscapes suggests



In the conference's opening address, Alain Stanké, a journalist, author and publisher of Lithuanian origin, gave a moving account of his childhood and arrival in Québec. With spirit and humour, he described what an immigrant goes through on arrival in a new country.

The full text of his presentation, entitled "Lettre à un jeune immigrant," is available (in French) on the following Web site: <www.meq.gouv.qc.ca/dscc>.



Conference on the Educational Integration of Immigrant Students

Differentiated instruction

At École Saint-Louis, an elementary school in the Commission scolaire Marguerite-Bourgeoys, integration and differentiation are part of the school's philosophy. Newly arrived immigrant students are placed in welcoming classes, but they are immediately integrated with the other students in music, physical education, art and, as soon as possible, math classes. "When we have a chance, we like to mix the students in the welcoming classes with the other children. These are ideal opportunities for them to spend time with the other students, so that they are able to integrate into the school and the teachers get to know them better," explains the vice-principal, Diane Hébert.

In addition, each of the students has an individual timetable and receives intensive instruction in reading, oral French or mathematics terminology, depending on his or her needs and progress. "All the children are never in the class at the same time," she explains. "This works for teachers who are able to individualize their



teaching. The staff was hesitant at first, but the excellent results of the initiative convinced them. Teamwork is the key. The students' progress has really been spectacular." As soon as the children can be placed in regular classes—any time in the year—they are transferred.

The school also organizes two weeks of cultural activities every year: when the children present music shows they have worked on throughout the year. "The immigrant students who have been taking part in the music class participate in the shows, which allows the children to make friends," notes Hébert. "And I've observed over the last few years that the parents of the children in the welcoming classes are very pleased with this initiative—they come to the school and encourage their children." It has also made up information kits describing the services available at the school and in the community in the different languages. "This reassures the parents and helps form networks among the families," explains Hébert.

New challenges

At École Louis-Riel, a secondary school in the Commission scolaire de Montréal, some of the students in the welcoming classes take part in the regular math classes. "We had several highly motivated students who were learning French quickly, and we realized they were ready for new challenges," explains Nicole Brunet, the French teacher for the welcoming class. The school established selection criteria. "We chose students whose French was good enough for them to keep up in math without needing any more help than other students. And we made sure they had the prerequisites for the course. Obviously, we chose our best students, the ones who were surpassing the expectations in math and who were autonomous."

Volunteers for the project were recruited at a meeting of the math teachers. "They gave us their criteria and expectations," says Brunet. "They were afraid of having to do extra work with these students. The key was the selection

criteria, which did a lot to reassure them."

The initiative was a success. "The students did very well—some were among the best in their class—and they were very gratified. They're our ambassadors now, because they speak to other students in the welcoming classes, which helps the others make the transition to regular classes." The project also helps counter prejudices on both sides. It is continuing next year, and even teachers of other subjects, such as physical education, visual arts and moral education, have expressed interest in it.

"That would be great, because we could place students according to different criteria, not only performance but also socialization, for example. It's a way to break the isolation of the welcoming classes, and it's needed. It's also a service to our students. Our role is to help them make the transition from their native country to the school system in Québec, so we have to open the doors for them and respond to their needs. Some of them find it long being in our classes for 10 months, so we have to give them new challenges!"

Total integration

École Sacré-Cœur, a secondary school in Granby (Commission scolaire Val-des-Cerfs), was taken by surprise by the mass influx of immigrants into the region. The school did not have any structure in place for integrating its 19 new immigrant students, most of them refugees. It had to act to find a solution. The administration reviewed the existing models, visited some schools with immigrant students, and studied the policy and program on linguistic school and social integration. They opted to place the students in regular classes immediately.

"We don't have enough students to form a welcoming class, but that wouldn't be our priority," says vice-principal Johanne Allard. "One way or another, we wanted immediate integration, with support in learning French. That was the choice we made." Upon arrival, the students are given intensive instruction in

the French language for three weeks, and then they are gradually integrated into the regular classes for their age group, with extra support.

The school devised an action plan and decided to create tools to support its approach, including the use of an individual portfolio for each student. "It's a way of getting to know the students better," explains the vice-principal. "When they arrived, we didn't know where they came from, what they'd experienced, or where they were in their studies. So we made up an information file that, while respecting confidentiality, allows us to take a more effective and more human approach. We put all their work into it, which enables us to monitor their progress." They also set up a tutoring system, with a teacher assigned to each student, and they created a guide for the parents in different languages, explaining the rules and the services provided by the school.

The project is currently in progress. "We found an organizational structure to fit our needs and our context," explains the vice-principal. "It's becoming clearer and clearer in everyone's mind. This is a school project we're creating, and we all have to pull together."

Getting to know each other

At École Marguerite-Bourgeoys, they've set up a project to encourage the use and appreciation of French by non-francophone students and to promote interaction among the students. One period a week, 75 students from both welcoming classes and regular classes get together to work on individual albums on some aspect of Québec culture, such as music, sports, movies or literature. The students do research in Québec media to find photographs and they write texts for their albums. The weekly meetings are filled with activities such as lunches, discussions, quizzes, charades, oral presentations and photo sessions, to enable the students to get to know each other better and to carry out their projects. At the end of the year, there is a cultural outing to a historical village. The project gives the students the experience of total immersion in Québec culture.

At École Saint-Vincent-Marie, an elementary school, they use improvisation to promote the use of French by the allophone students and bring together immigrant and francophone students. Two welcoming classes and two regular classes were taught improvisation in workshops run by professional actors from the Ligue nationale d'improvisation, and after practising in class for a month, took part in an improv tournament in the school gym. The activity was a success. Although at the beginning the students were shy and unsure of what to do, they learned quickly and were soon improvising like pros. "This affected the students in many ways," says Nathalie David, the teacher of one of the welcoming classes. "It developed their creativity, raised their self-esteem, increased their enjoyment of speaking French, improved their ability to listen, increased their respect for others,

made them more open-minded and brought them closer together." Not bad for improvisation! ☘



Conference on Complementary Educational Services

By Pascale Sauvé (Translation)

Helping all young people to reach for their dreams is one objective that cannot be attained without the valuable contribution of those in complementary educational services," stated Minister of Education Pierre Reid at the opening of the conference. He pointed out that these essential services enrich young people's education, help them achieve success and encourage them to stay in school. "This conference is a good opportunity to share achievements and experiences in order to provide even better services to our students, because they are our raison d'être."

Changes

With the education reform, the role of complementary educational services has been redefined and reoriented. The services are required to be more numerous, more flexible and closer to the students' needs and characteristics, to contribute to the school's educational mission, to be integrated with the instructional services and open to the school and the community and more. These are major changes, and they call for a revitalization of practices.

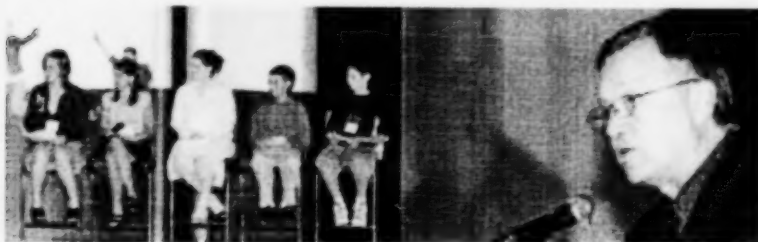
"In fact, the reform gives added legitimacy to complementary educational services and provides opportunities for true partnership," said Paul Inschaspé in his presentation. The approach adopted calls for greater consistency in the school's educational activities so as to guide students and help them reach their goals and meet the challenges ahead of them. It demands collaboration by all partners in a shared process centred on the student.

Inschaspé further noted, "It requires a shared understanding of the students in order to act more effectively."

Personnel in complementary educational services play an essential role. They make school life stimulating, dynamic and motivating; expand opportunities for learning; help students develop their identities and provide support to those experiencing difficulties. Like Valérie, Mylène, Annie-Ève, Olivier and Jérémie, elementary and secondary school students who came to give their points of view at the conference, thousands of students would see school very differently without these services, which have given them a chance to be involved in fundraising, organizing events, aid committees, contests, trips abroad and other activities. They say they are more motivated, more self-confident, more optimistic about the future, more responsible, and more aware of themselves and their potential. The activities of complementary educational services have made the school a more stimulating and meaningful environment for them.

Achievements

There have already been many successes, as was amply demonstrated by some fifty workshops dealing with as many projects, actions and activities in the field. All these had one point in common: they involved joint action, with the school's partners and in most cases the community. Ways and means were presented for implementing and coordinating the new complementary educational services programs, collaboratively developing and carrying out the educational project, the success plan and



individualized education plans, bringing together the school team to find concrete solutions to the needs identified (health, prevention, support for students with difficulties, guidance, etc.) and forming partnerships with groups. Initiatives came from every quarter.

The right conditions

After two days of reflection, it was clear that there are still many challenges to be met. As Robert Bisailon, Assistant Deputy Minister for preschool, elementary and secondary education, said in a plenary session, "Most staff feel neglected, isolated and exhausted, and they often have the impression that their competencies are not respected." Too often, complementary educational services are still considered marginal to instructional services and are accorded little recognition. Coordination and collaboration are not always easy to achieve and roles and tasks are not clearly defined.

Various strategies were presented to promote the revitalization of practices: have the persons concerned do an analysis of the situation, focus on the students, develop a shared vision, organize the services collaboratively, clearly define priorities for action and strategies, do long-term planning, rely on the stability of structures and personnel, plan time for meetings, have staff work together and not in isolation from one other, provide training in networking and partnership, establish support measures and develop a clear understanding of the new roles of personnel.

The conference was clearly a source of inspiration and motivation for the participants, who took home new tools, strategies, and examples. It was an opportunity for all to share their expertise with others. ■

he world of education has been changing in the past few years, and so has the rest of society. "The situation we are currently experiencing is rare historically," says Mr. Colletette. "We are living in a period of social change, with repercussions on all organizations and activity sectors both here and in Europe. Organizations have been in a real state of turbulence for some 15 years." An extraordinary wave of reengineering and restructuring of modes of operation started in the late 1960s and is sweeping the Western world. "In 400 years, we have never seen such a great impetus for change whose source is external. Naturally this gives people the impression that they lack control."

Dealing with change implies facing the unknown. "We do not know what lies ahead. It will be a collective creation, something new altogether," says Mr. Colletette. Not surprisingly, this transition

is not instantaneous, but involves a long process. "We're still in the process of tearing down, not rebuilding," he adds. "That's why we may feel disconcerted, dissatisfied and vulnerable."

The process of change

Change occurs in three main phases. The first is the realization that change is necessary and the readiness to take action. The second is the transition, or rebuilding, phase. "This is the most critical, most difficult and most poorly managed phase," explains Mr. Colletette. "Once we get through this phase, ritualization occurs. The only thing remaining is to apply the new practices. Naturally, that's the easiest phase."

The critical phase is that of transition, because we find ourselves in a situation of disarray and imbalance. "Changes cause trauma. To be successful, we need measures for guidance and follow-up. We can expect fatigue, exhaustion and confusion. If measures are not taken to support staff during the process, there's a risk of failure."

It is important for the people involved to take a position regarding changes, according to Mr. Colletette. "We can adopt one of two attitudes. We can choose to be victims, to dig in our heels and resist change. With this attitude, we are doomed to failure. Or we can choose to be agents, to experiment and take action. In this case, we have a better chance of success. It won't necessarily be an easy or seamless process, but we will make it through!" "We never know what is on the other side or where the wave will take us, but some pleasant surprises may be in store. We can at least put our effort into building the kind of world we want to live in. ■

Healthy schools

In the Mékinac area, which is in the Mauricie and Centre-du-Québec regions, the Healthy Schools project has brought out the full meaning of concerted action. In recent years, the organizations in the area have been working closely together for the same cause: children's welfare. "Our goal is to go beyond pooling our activities to reach an integrated approach to intervention," explains the project coordinator, Pierre Groulx.

The project arose from a desire expressed in 1996 by the Régie régionale de la santé et des services sociaux, to direct action on health promotion and prevention more toward young people in the schools. "We wanted to establish the conditions for a healthy, safe, stimulating and supportive environment for children," explains Groulx. The project aimed to foster children's overall development, promote healthy lifestyles, develop social skills and prevent social problems through coordinated, consistent, continuous actions (within and outside the school) administered by the group of partners.

When the project was presented to potential partners, 35 of them expressed interest. "I must say there was already a desire to work together in the community," Groulx points out. "We took stock of what was already being done, assessed the needs that were being met and those that still remained to be met. We realized that there were duplications and that we needed to work together to create consistency and continuity."

They created a regional coordinating body made up of representatives from every area. "The idea was to create a place where we could take the time to think together," explains Groulx. The role of this body is to support the Healthy Schools teams, to foster an integrated, consistent approach in the schools, to assess the situation with respect to certain particular needs, to place a priority on certain programs and to take part in the evaluation of the project. A coordinator was designated. "My role is to bring people together and mobilize them," says Groulx. "This means creating and maintaining a relationship of trust and encouraging everyone to participate."

Two Healthy Schools teams were formed as a result of this initiative, one working with children aged 5 to 12 and the other with teenagers aged 12 to 17. Each team was made up of people from education, health care, community groups and municipal affairs, as well as parents. They work in the eight elementary schools and the secondary school in the Mékinac region, establishing priorities and developing an action plan. They coordinate activities with young people within and outside the school context, as well as with the schools themselves, the professionals, parents and community organizations. They have determined the needs of the various groups (support, training, resources, information), their roles and their involvement in various activities. "We're interested in the school as a life environment, but also in the context outside the school," says Pierre Groulx. "Activities are planned year-round, because children are always developing." Subcommittees have been formed to deal with specific needs such as self-esteem,

anxiety disorders, and alcoholism, drug addiction and violence.

At École Paul-Le Jeune, a secondary school in Saint-Tite, the Healthy Schools project was made part of the school's educational project and success plan. The Healthy Schools team helped set up the *New Approaches, New Solutions* (NANS) intervention strategy at the school.

The project provides a connection among the actions carried out at the school. "If a teacher or practitioner wants to do an activity, it has to fit into this project, which creates consistency," explains principal Marc Brunelle, who is active in various committees of the Healthy Schools project. The school is also increasingly open to the community. "There are a lot of practitioners who come to the school to meet with students, and partners who become involved in the school," says the principal.

Danielle Plante is a community worker with the project. "We wanted there to be one stable person who was prepared to spend several years working with the schools and the Healthy Schools teams," explains Brunelle, "someone who would be a reference person for the young people, personnel and parents as well as the various partners." Plante herself says, "Participating in the Healthy Schools project lets me meet the practitioners who are working with the students. That gives me an understanding of their reality. In fact, we all work with the same young people, and it's important to cooperate to make our actions consistent and continuous so that they have meaning for the young people."

The initiative is continuing, and it is constantly evolving. The participants are now striving to increase collaboration among the committees and partners, to diversify the activities and to create an action plan in the longer term. But they have already taken a big step toward building a true educational community in the service of young people.

A community involvement program

There's something new at the Polyvalente Nicolas Gatineau, in the Commission scolaire des Draveurs. For the past two years, the Moral Education course in Secondary V has been replaced by a program of study in community involvement. Every year, the 500 students in the graduating class carry out volunteer activities for students in the community. Their aim is to help students construct their identity and develop their world-view and ability to take action.

At the suggestion of school principal Nicolas Gatineau, who wanted to offer a course in volunteer action, a team was formed, consisting of an education consultant and some teachers and complementary educational services personnel. Their mission was to develop a new program. "The idea was to find a win-win formula for the students," explains the education consultant, Pierre Chénadé, "so that they could feel they would be giving something but also getting something back. So we stressed the construction of identity. The program allows students to know themselves better and to discover their interests."

The program is part of the school's educational mission to provide instruction, to socialize students and to provide qualifications. "It especially involves socialization, because the students work in teams and contribute to the community, and qualifications, because as they progress the students have new experiences and learn about themselves and what they like and dislike." The course is built on values such as civic action, mutual assistance and sharing. "It's about making society more human," adds the education consultant. "We want the students to learn to work with others and to show solidarity with them."

"The teacher is there to guide the students, with the help of the entire complementary educational services team," he explains. "There

are some students who make good progress, while others need more support. Everyone works to help the students gain self-knowledge and develop their creativity." The personnel help the students find volunteer activities and create events, because the students have to do 30 hours of volunteer work in the course of the year. "The purpose of the course is for students not just to gather information or accumulate volunteer time," the education consultant points out, "but to go through a process of reflection and analysis of what they are doing, why they are doing it, how they work as part of a team, what they get out of it, etc."

"We don't put them to work right away," adds Denise Labrèche, the spiritual care and guidance and community involvement animator. "We start by presenting the concept and getting the students to think about it." Throughout the activities, they also take the time to put things in perspective and offer feedback.

The course has the effect of involving not only the students, but all the partners—the personnel, the community and the families. "The project develops collective competencies, which by definition can only exist when there is a goal or project. So the community involvement course becomes a project that rallies people and gives rise to solidarity and creativity. It's a great opportunity to open the school up to the community. There are no restrictions to the course—it's very open. For it to succeed, everyone has to get involved."

In describing the program's impact, students say they have grown and are more autonomous and more aware of the world around them. They say they have developed their aptitudes and know themselves better. They have discovered that a simple gesture that comes from the heart can make a difference. They have reaped what they have sown—as did all the partners in the project. ■

Two New Programs

At the Conference on Complementary Educational Services, Minister of Education Pierre Reid presented details on two new programs. The Homework Assistance program is designed for students in public elementary schools, and the Wellness-Oriented School program is aimed at public schools with students in Elementary Cycle Three or Secondary Cycle One.



To participate in the programs, schools must submit projects to their school boards, which will have until November 15, 2004, to send the projects selected to their MEQ regional offices.

Further information on these programs is available from the regional offices, the MEQ information centre or the MEQ Web site at www.meq.gouv.qc.ca.

EVALUATION OF STUDENT LEARNING

By Norionid Dujour (Translation)

Developing a New Mathematics Examination

A prototype of a mathematics examination for the end of Elementary Cycle Three was made available to school boards and private schools in the spring of 2004. The purpose of this optional examination was to prepare the school system for the advent of a compulsory mathematics examination in Elementary Cycle Three and to equip teachers to use evaluation practices as part of the development of competencies.

The two-part examination covered the main mathematical concepts dealt with in Cycle Three and consisted of three situational problems and ten situations involving applications. Teachers were asked to have their students solve two of the three situational problems and some or all of the situations involving applications in order to evaluate the students' acquisition of the competencies of the Mathematics program.

Since the situational problems each took from two to five hours to solve and the situations involving applications took from 15 to 30 minutes, various scenarios were proposed for the administration of the examination. For example, one situational problem could be administered in May and a second one in June, and in between, three or four situations involving applications could be completed each week. The teachers had all the flexibility they needed to fit all or part of the examination into their calendar of educational activities.

Situations involving applications are appreciated by students

The situations involving applications in the prototype examination allowed students to demonstrate their mathematical reasoning by describing the procedure they used to do the work or by justifying their statements or actions. Several of the situations were developed and field-tested by teams of education consultants and teachers. The situations covered all the areas of mathematics (arithmetic, geometry, measurement, statistics and probability) and the key concepts (including operations using natural numbers, decimals and fractions) dealt with in Elementary Cycle Three.



The feedback was the same as that received during field-testing: students like working with the situations, and according to the teachers, the results are a good reflection of the development of the competency "to reason using mathematical concepts and processes."

Students produce colourful original work on situational problems

The three situational problems included in the prototype examination involved very different tasks. In "Mary's Wildlife Centre," students had to design a site plan for a wildlife centre, showing sections for the different animals. In "You've Got the Whole World in Your Hands," they had to design a flag illustrating certain situations in the world today. In "Our Forests," they had to carry out various tasks related to the state of the forests in this country. The situations "You've Got the Whole World in Your Hands" and "Our Forests" involved problems whose educational aims are related to the broad areas of learning *Citizenship and Community Life* (culture of peace) and *Environmental Awareness and Consumer Rights and Responsibilities* (construction of a viable environment based on sustainable development) respectively. The approaches suggested in the situational problems and extension activities allowed teachers to adjust their strategies if they so wished. The students gave very positive feedback on the situational problems. Their colourful work in "You've Got the Whole World in Your Hands" and "Mary's Wildlife Centre" also showed their interest in

the activity. The teachers pointed out that the students were not accustomed to this type of open situation that allows for a different solution by each student.

A new marking guide

One unique feature of the examination is the marking guide, which is different from the correction key that is traditionally part of a mathematics examination. The guide includes sample answers, with commentary, for each performance level described in the assessment scale. This tool was very useful for correcting the work and it was much appreciated by the teachers, who also used it in discussing the tasks. In fact, several teachers used an overhead projector to show their students samples of answers from the guide in order to talk about methods and possible solutions.

A model to be developed

What will the mathematics examination be like in 2005? Work has already started on it, taking into account the experience of this first year. We have received many comments on the format of the examination, the related documents and the mathematics content covered. Many of the comments will influence the development of the examination model. However, the broad parameters will not be changed. The analysis of the students' work, which teachers will send to the Direction générale de la formation des jeunes, will help us improve the prototype. 📌

The three competencies of the elementary school Mathematics program

To solve a situational problem related to mathematics	To reason using mathematical concepts and processes	To communicate by using mathematical language
KEY FEATURES • To decode the elements of the situational problem • To share information related to the solution • To validate the solution • To apply different strategies to work out a solution • To model the situational problem	• To define the elements of the mathematical situation • To justify actions or statements by referring to mathematical concepts and processes • To apply mathematical processes appropriate to the given situation • To mobilize mathematical concepts and processes appropriate to the given situation	• To become familiar with mathematical vocabulary • To interpret or produce mathematical messages • To make connections between mathematical language and everyday language

Navigating in Calm Waters

What precautions should you take when sending an email? Are you allowed to copy a list of hypertext links onto your own personal Web site? How can you protect personal information when using the Internet? These are the kind of questions asked by people who want to navigate the Internet safely and responsibly. You will find all the answers on a new site called *Guide des droits sur Internet*.

This guide was developed by the Centre de recherche en droit public at the Université de Montréal, on request of the Ministère de l'Éducation and the Secrétariat du Conseil du Trésor. Intended for teachers, students, public library personnel and the general public, this new site clarifies many of the risks that exist and what precautions to take when using the Internet. It also explains how to set up standards and conditions for use, and provides procedures to follow in specific situations such as using email, discussion forums, chatting, etc.

For more information, consult the *Guide des droits sur Internet* at <www.droitsurinternet.ca>.

Don't miss Congrès 4 arts 2004

A pre-conference and a conference on Arts Education to be held November 11, 12 and 13, 2004, at the Sheraton Hotel in Laval. This conference is an opportunity for people interested in Arts Education to come together to discuss the different Arts Education subjects and to take part in professional development. Visit the Web site (French only) at <aqesap.org> for information on the workshops (click on "Congrès et colloques," then "Programme et horaire") and registration fees and forms. This site is updated regularly.

For further information, contact Louise Filion at the AQESAP secretariat:
Tel: 450 655-2435
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E-mail: louise.filion@enter.net

CSST Challenge Educates Young People about Occupational Safety



In keeping with the principles of the education reform, the *Défi prévention jeunesse* aims to raise young people's awareness of prevention by fostering safe behaviours and attitudes before they reach the job market. The project is run by the Commission de la santé et de la sécurité du travail (CSST) in collaboration with the Centrale des syndicats du Québec, the

Fédération des commissions scolaires du Québec and the Ministère de l'Éducation du Québec. It is intended for children in preschool and daycare in schools, elementary and secondary students in the public and private sectors, and students in vocational education.

To obtain an information kit:

- contact your school administration
- call 1 866 230-1710 (toll free)
- or visit the CSST Web site: <www.csst.qc.ca>

To participate, schools must enroll by the end of November.

La prévention, j'y travaille!



Conference Report

Summaries of the forums held during the March 29, 2004 conference on intervention in disadvantaged communities, organized under the *Supporting Montréal Schools and New Approaches, News Solutions* programs, are now available on-line. The forums addressed issues such as school success for boys, renewing management practices within an environment of change, collaboration between school, family and community, successful classroom practices, promising school interventions and cultural activities in schools. The summaries (in French) can be found at: <www.meq.gouv.qc.ca/ecolemontrealaise>.

SCHOOLSCAPES

WORKING TOGETHER TO INSTRUCT, SOCIALIZE AND PROVIDE QUALIFICATIONS

Schoolscapes is under the responsibility of the Secteur de l'éducation préscolaire, de l'enseignement primaire et secondaire

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